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From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY(PCT Rule 43 *bis*.1)

Date of mailing

(day/month/year)  
13 APR 2006 (13.04.2006)

Applicant's or agent's file reference

DF0517396P

## FOR FURTHER ACTION

see paragraph 2 below

International application No.

PCT/CN2005/002419

International filing date (day/month/year)

31.DEC.2005 (31.12.2005)

Priority date (day/month/year)

31.DEC.2004 (31.12.2004)

International Patent Classification (IPC) or both national classification and IPC

## See supplemental box

Applicant

HUAWEI TECHNOLOGIES CO., LTD. ET-AL

## 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion  
☐ Box No. II Priority  
☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  
☐ Box No. IV Lack of unity of invention  
☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  
☐ Box No. VI Certain documents cited  
☐ Box No. VII Certain defects in the international application  
☐ Box No. VIII Certain observations on the international application


## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

## 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Date of completion of this opinion 27.MAR.2006 (27.03.2006)	Authorized officer  Telephone No. (86-10) 62084533
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/CN2005/002419

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of :
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/CN2005/002419

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement:**

Novelty (N)	Claims 1-10	YES
	Claims	NO
Inventive step (IS)	Claims 1-10	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-10	YES
	Claims	NO

**2. Citations and explanations**

The report is based on the following documents in the search report:

D1: CN, A, 1189269

D2: CN, A, 1407763

D3: US, A, 5159595

The subject matter of claims 1-10 is a method for protecting data service in metropolitan transmission network.

D1 discloses a self healing communication node network with main and protection rings. The network has link supervision devices for monitoring power on input and output lines and deflecting traffic onto protection ring when failure occurs.

D2 discloses a protection method on wideband switching network. The method comprises: establishing virtual circuits from a source node to adjacent nodes in a common leaf, establishing working rings/links and protecting rings/links of network virtual circuits in a common leaf of the other nodes, establishing protecting leaves in a protecting leaf on working and protecting ends, automatically switching between the working and protecting end of faults occur in the circuits, and extracting group broadcasting business streams in protecting rings/links.

D3 discloses a ring transmission system for e.g. telephone central offices - has nodes coupled in ring via two multiplexed transmission paths having opposite transmission directions and time, space or wavelength multiplexed.

Disclosed in the above documents don't disclose all the features in claims 1-10. There are not the same technical proposals described in the D1 to D3, so the claims 1-10 are novel compared with the prior art, and comply with the requirements of the PCT Article 33(2).

Therefore, those skilled in the art cannot achieve the technology scheme of claims 1-10 from the teaching which combining the D1-D3. So the claims 1-10 are not obvious compared with the prior art, and do comply with the PCT Article 33(3), that is, have the inventive step.

Claims 1-10 meet the criteria of PCT Article 33(4), because the invention as claimed is found to have practical applications in the industry.

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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of: International Patent Classification (IPC) or both national classification and IPC

H04L 12/437(2006.01)i

H04J 3/08 (2006.01)n